Title:
Effects of postage on recovery of pathogens from cystic fibrosis sputum samples

Lay Title:
Postage of sputum samples from home to clinic can be used for microbiology surveillance

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What was your research question?
As posted samples are increasingly being used for microbiological surveillance of lung infection, we need to know that these are reliable at identifying the pathogens from the lungs of people with living Cystic Fibrosis (CF).
Cystic Fibrosis Research News

**Why is this important?**
Regular surveillance microbiology of sputum is used in cystic fibrosis (CF) to monitor for new pathogens and target treatments. A move to remote clinics has meant greater reliance on samples collected at home and posted back. The impact of delays and sample disruption caused by posting has not been systematically assessed but could have significant implications for CF microbiology.

**What did you do?**
We have looked at 93 samples from 73 patients, posted back to the lab, and assessed the impact of this delay on both culture-based and molecular analyses of the same sputum samples.

**What did you find?**
Even with delays of over 7 days, culture-based pathogen retrieval was essentially unchanged by posting. For molecular techniques the retrieval of typical CF pathogens is also robust, with no significant change in CF pathogen abundances or in the wider microbiota.

**What does this mean and reasons for caution?**
We describe detailed analyses of the CF microbiology and show how these appear to be unaffected by even prolonged delays due to posting. These are discussed in the context of changes to sample collection in CF that have occurred in the last few years. This supports use of posted samples during remote monitoring.

**What’s next?**
In a time where remote clinics are being deployed for other chronic respiratory diseases, our work provides reassurance that samples posted from home can be relied upon for research and clinical interpretation. Next steps are to deploy this as a useful and routine tool in CF clinics.

**Original manuscript citation in PubMed**